

AMENDMENTS TO THE CLAIMS

Listing of the Claims:

Following is a listing of all claims in the present application, which listing supersedes all previously presented claims.

1. (Withdrawn) A method for manufacturing a light-emitting device with compound semiconductor comprising:

forming an n-semiconductor layer, an activated layer, and a p-semiconductor layer, in order, on top of a double substrate;

making at least a part of the n-semiconductor layer exposed by a mesa-cut in a vertical direction from the p-semiconductor layer to a part of the n-semiconductor layer;

forming a transparent electrode for extending an electric current on the top of the p-semiconductor layer and activating the p-semiconductor layer using an oxygen plasma; and

forming an n-pad electrode and p-pad electrode on the top of the transparent electrode for extending an electric current.

2. (Withdrawn) The method of claim 1, wherein said double substrate is a sapphire substrate.

3. (Withdrawn) The method of claim 1, wherein one or more of the n-semiconductor and p-semiconductor layer is a Group III-V compound semiconductor layer.

4. (Withdrawn) The method of claim 1, wherein the transparent electrode is directly formed on the p-semiconductor layer without having an oxide layer formed first on a surface of the p-semiconductor layer facing the transparent electrode.

5. (Currently Amended) A light- emitting device comprising:
a double substrate;
an n-semiconductor layer, an activated layer, and a p-semiconductor layer, formed in order, on top of the double substrate, wherein the p-semiconductor layer is ~~heated~~activated by a heat-treatment at a temperature less than about 600 °C under the condition of an oxygen plasma ion;
a transparent electrode for extending an electric current formed on the top of the p-semiconductor layer;
a p-pad electrode directly formed after the heat-treatment on the top of the transparent electrode for extending an electric current; and
an n-pad electrode formed on part of a mesa-cut section of the n-semiconductor layer for extending an electric current.

6. (Previously Presented) The device of claim 5, wherein said double substrate is a sapphire substrate.

7. (Previously Presented) The device of claim 5, wherein one or more of the n-semiconductor and p-semiconductor layer is a Group III-V compound semiconductor layer.

8. (Previously Presented) The device of claim 5, wherein the transparent electrode is directly formed on the p-semiconductor layer without having an oxide layer formed first on a surface of the p-semiconductor layer that is between the p-semiconductor layer and the transparent electrode.